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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,296	01/29/2001	Andrew Kevin McParland	50060-042	8376

7590 10/19/2004

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600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

KNEPPER, DAVID D

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/770,296	Applicant(s) MCPARLAND, ANDREW KEVIN	
	Examiner David D. Knepper	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 14, 19-24 and 30 is/are rejected.
- 7) ☒ Claim(s) 4-13, 15-18, 25-29 and 31-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's correspondence filed on 29 January 2001 (Preliminary Amendment) has been received and considered. Claims 1-35 are pending.

Title

2. The title is objected to because the words "Method for" are unnecessary and deleting them will reduce the length of the title closer to the preferred length of 2-7 words (MPEP 606).

Declaration

3. The Declaration of the Disclosure is objected to because the signature of the inventor does not match the printed name "Andrew Kevin MCFARLAND". It is also noted that some words are unclear and text is cut off along the right side of the Declaration and at the top of page 2. It is unclear whether text was cut off by fax transmission or by scanning errors at the PTO. However, a new Declaration is needed to correct the signature inconsistency so the other problem can be cleared up with a new Declaration as well.

Drawings

4. The drawings are objected to because they fail to illustrate the insertion of digital data into an audio digital data stream. The figures are not properly labeled with reference numbers for proper reference from the specification.

Correction is required.

However, it is noted that the prior art teaches that it is well known to add auxiliary data to an audio signal that is digitally coded. Therefore, it is assumed that an obvious method is used to achieve the desired result that the applicant has described and claimed.

Priority Claims

5. The applicant(s) should check their filing receipts and/or the Patent Application Information Retrieval (PAIR) system for the acknowledgment of their **domestic** priority or benefit claims (if any) under 35 USC 119(e), 120 or 121 (37 CFR 1.78).

Claims

6. Claims 4-13, 15-18, 25-29 and 31-35 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must specify the claims upon which they depend in the alternative only and cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-3, 14, 19-24 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Parts of the specification indicate that it is best to put the auxiliary information into low sub-bands (i.e. – page 13) but others indicate the use of high sub-bands (i.e. - pages 16-17). To further prosecution it is assumed that doing it either way is obvious as suggested by prior art.

9. Claims 1-3, 14, 19-24 and 30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The only disclosed element capable of performing the desired method appears to be the analysis and synthesis filterbanks.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-3 and 19-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Spille (5,712,920).

As per claims 1, 20 “inserting auxiliary digital data” is taught by Spille’s transmission and/or storage and decoding of an auxiliary signal:

“identifying at least one component of the main data stream which will make substantially no contribution to the coded data stream and inserting data from the auxiliary data stream in the... component” is suggested by his teaching The auxiliary signal is transmitted in one of the frequency bands at a level much lower than the level of the audio signal (abstract).

It is noted that Spille does not explicitly use the terminology “one component ... which will make substantially no contribution”. However, he teaches that utilizing the MPEG audio standard, the bit stream may be modified with auxiliary data which can accommodate data of all types, and can be place in any subband selected by analysis to produce a virtually inaudible data channel (col. 1, lines 31-59). It would have been obvious for a person having ordinary skill in the pertinent art, at the time the invention was made, to place auxiliary information of any type into part of the bit stream that would otherwise present substantially no contribution to the coded data” because Spille teaches that his auxiliary data may be placed in any subband such that it will be inaudible. Thus, if the data stream is audio, then the inaudible nature of Spille’s modification will be an obvious equivalent to the claimed “substantially no contribution”.

Claims 2, 3, 19, 21, 22: “At a level below the quantization noise floor” simply defines according standard MPEG processing that the signal at that level will be inaudible which is what Spille teaches regarding the level of the auxiliary signal (see above and col. 2, lines 16-29). It is noted that MPEG coding is a form of quantization; the resulting digital signal is the quantization of the analog signal (audio).

Claims 23, 24: The subbands of MPEG represent frequencies that are carefully analyzed utilizing psychoacoustic masking thresholds. These are based upon masking properties of the human ear analyzed in accordance with known relationships between frequency, bandwidth and

amplitudes of competing sounds to include the relative spacing of subbands given frequency and bandwidth.

12. Claims 14 and 30 are rejected under 35 U.S.C. § 103 as being unpatentable over Spille (5,712,920) in view of Ten Kate ("A New Surround-Stereo-Surround coding Technique").

It is noted that Spille remain silent regarding any need for "synchronization". However, Ten Kate teaches details for adding auxiliary information inaudibly to audio signals which is the same goal as Spille. Ten Kate teaches in the left column on page 380 that synchronization is required at the receiver end to more accurately reconstruct the signal. Thus, it would have been obvious to provide auxiliary information to assist proper synchronization because Spille teaches that auxiliary information can accommodate data of all types (col. 1, lines 49-50) and Ten Kate teaches that it would be useful to have accurate synchronization to improve proper decoding of a transmitted, coded signal such as the one taught by Spille.

Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art is cited to show that it is well known to send auxiliary data in various forms, for various reasons, in combination with other data such that the auxiliary data will be hidden (or inaudible) to improve the quality of the other data.

14. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

TC2600 Fax Center
(703) 872-9314

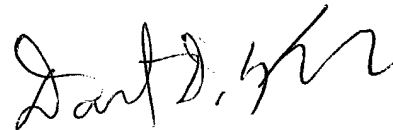
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644.

The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service whose telephone number is (703) 306-0377.



David D. Knepper
Primary Examiner
Art Unit 2654
October 14, 2004
